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Developing learning relationships in intercultural and multi-disciplinary environments: A mixed method investigation of management students' experiences

Abstract

In this article, we suggest that competencies in working in intercultural and multidisciplinary environments are part of expected key skills in contemporary organisations. Higher educational institutions across the globe are pressured to contribute to the development of such key skills. Using social identity theory, through social network analysis of 113 postgraduate management students in one UK business school and follow-up focus group interviews (N=16), we have identified three types of learners: Co-National Learners, Bridge-Building Learners, and Cross-National Learners. We argue that developing learning relationships in intercultural and multidisciplinary environments needs to go beyond a cultural-only approach, and the understanding of identity has an important place.

Keywords

Higher education, identity, individual learning, knowledge sharing, cross-cultural

As internationalisation becomes a key feature in global organisations, international experience and training are increasingly perceived to open up opportunities for future employment (Ng et al. 2018). Similarly, competencies in working with people from diverse backgrounds and across different sectors are often viewed as key to employability (Department of Business 2015, Heffernan et al. 2018, Summers and Volet 2008, Woodall, Hiller, and Resnick 2012). In this way, higher education is ‘under growing pressure to provide graduates with opportunities to complement discipline-based competency with multidisciplinary and interdisciplinary skills’ (Pharo et al. 2012, 498). In light of rising international student numbers, this means that institutions must make efforts to develop and nurture an inclusive environment, which helps students build learning relationships that are intercultural (Davies et al. 2015, Woodall, Hiller, and Resnick 2012) and multidisciplinary (Borrego and Newswander 2010, Rienties and Héliot 2018).

Considerable attention has been devoted to analysing the cultural behaviours and perceptions of graduate management students, in particular amongst MBA students (Arbaugh 2014, Baldwin, Bedell, and Johnson 1997, Boni, Weingart, and Evenson 2009, Mintzberg 2004). However, less is known about graduate students’ learning experiences in intercultural *and* interdisciplinary management programmes. In particular, it is worth investigating how students’ multiple cultural and programme-specific identities and group memberships interact and impact experiences.

To unravel the complex social learning environments in postgraduate business classrooms, we have analysed the learning relationships between postgraduate students in an intercultural and interdisciplinary learning environment using the social identity theory of Tajfel and Turner (1979). Building on well-established social network approaches (Baldwin, Bedell, and Johnson 1997, Borgatti and Cross 2003, Curşeu and Pluut 2013), we combined a social network analysis survey of 113 students with follow-up focus groups with 16

participants. Our findings have outlined three categorisations of students' experiences, along with factors that influence students' learning relationship development patterns.

Learning Relationships

Previous research has found that building learning relationships with peers is an important foundation for collaboration. Although there are a range of definitions of learning relations, in this study we take a rather practical approach and, in line with our previous work (Rienties, Héliot, and Jindal-Snape 2013), we define learning relations between two or more learners as “sharing and building on each other’s ideas, learning goals, learning materials, and/or summaries”. For example, the role of shared mental models is highlighted in teamwork literature, whereby understanding the strengths and weaknesses of team members contributes towards a ‘common ground’ for collaboration (Decuyper, Dochy, and Van den Bossche 2010). Shared mental model is seen as “knowledge structure held by members of a team that enables them to form accurate explanations and expectations for the task, and in turn, to coordinate their actions and adapt their behavior to demands of the task and other team members” (Cannon-Bowers, Converse, and Salas 1993). In higher education contexts, Curşeu, Janssen, and Raab (2012) found that relationships between peers can also reduce conflicts, thereby leading to more cognitive gains. Similarly, building learning relationships with peers is positively linked to academic performance in the Netherlands and Canada (Curşeu and Pluut 2013, Gasevic, Zouaq, and Janzen 2013).

Nonetheless, it is recognised that social and learning relationships do not necessarily occur naturally or automatically (Decuyper, Dochy, and Van den Bossche 2010, Van den Bossche et al. 2006), particularly in intercultural contexts (Curşeu and Pluut 2013, Heffernan et al. 2018, Summers and Volet 2008). For example, in a UK context Harrison and Peacock (2010) outline that many domestic students feel anxiety when working with international peers.

Similarly, students often feel that working on learning activities with peers from other countries is more difficult (Moore and Hampton 2015, Heffernan et al. 2018), frequently leading to self-segregation by cultural backgrounds (Singaram et al. 2011). Students may also perceive discrimination from peers, which can impact their level of comfort or interest in developing learning relationships outside their own cultural group (Harrison and Peacock 2010, Moore and Hampton 2015, Summers and Volet 2008, Volet and Jones 2012). Perhaps for these reasons, it has been demonstrated that many students form social learning relationships with peers from similar backgrounds (Singaram et al. 2011, Hendrickson, Rosen, and Aune 2011, Volet and Jones 2012).

Yet, conceptualising these segregations based solely on cultural backgrounds depicts a relatively narrow vision of students' social learning environments. Indeed many higher education classrooms are both intercultural and multidisciplinary, representing multiple and perhaps competing kinds of 'sameness' that simultaneously impact the ways in which students form learning relationships. For example, Rienties, Héliot, and Jindal-Snape (2013) used social network analysis during small group work assignments amongst 191 international students and 16 home students and found that both programme discipline and cultural background influenced with whom students learned. Therefore, in addition to cultural similarities, students may find they also have commonalities with those from their own academic programme, considering they have similar areas of expertise (Curşeu and Pluut 2013) and more opportunities to interact. At the same time, it has been argued that many interdisciplinary courses lack an integrated approach towards sharing knowledges and expertise between students in different programmes (Borrego and Newswander 2010).

Therefore, students might approach developing learning relationships in different ways, depending on their individual circumstances and conceptualisations of their own identities. As much previous work has focused primarily on cultural differences between students, more work

is needed to understand how culture interacts with other categorisations, such as academic programme membership, to impact learning relationship developments. In this study, we concentrate on the learning relationships between postgraduate students in intercultural and multi-disciplinary environments. One lens for further exploring this phenomenon is through social identity theory (Tajfel and Turner 1979), which is described next.

Social Identity Theory

According to social identity theory (Tajfel and Turner 1979), individuals build social identities from their group membership and have basic psychological needs for satisfying social identities. People identify with social groups and categories that fit their self-perceptions, providing a sense of pride and self-esteem. Social identity theory argues that individuals have a need for positive social identity, expressed through a desire to create, maintain or enhance the positively valued distinctive conditions where people defined and evaluated themselves in terms of their group membership (Turner 1982). Self-categorization theory (Turner 1982) explains this process, specifying the nature of category membership (voluntary or prescribed), and boundaries (in-groups and out-groups). This in-group (us) will lead to favouritism towards the in-group and potentially “discriminatory” behaviour to the out-group (them). For example, in a quasi-experimental study using pre-post social network analysis instruments with 377 postgraduate students following an interdisciplinary module on Organisational Behaviour, Occupational and Organisational Psychology students were found reluctant to share knowledge or work with Human Resource Management students, and vice-versa (Rienties and Héliot 2018).

The explanatory power of social identity theory is recognised in learning and knowledge sharing behaviours. For example, Gao and Riley (2010) established a connection between identity and knowledge whereby they suggest that knowledge has a central place in the cognitive structure of an individual’s identity. Hence, this knowledge is anchored by a

degree of possessiveness which in turn affects the individual's willingness to disclose their knowledge in a knowledge transfer process. The central premises of the identity and knowledge connection are first, that knowledge is part of the self-categorization process; the way an individual locates themselves within their cognitive social world is influenced by the self-evaluation of their knowledge. Second, that knowledge is held and categorized as a social construct through group affiliation. Third, that knowledge is embedded within action. Fourth, there is a process in which awareness of identity is activated when confronted with knowledge embedded in a situation (Gao and Riley 2010). These premises speak directly to social learning relationships and has particular relevance to the understanding of the phenomenon of how academic programme membership may impact learning relationship developments.

More recent work by Rienties and Héliot (2018) showed that intercultural and multidisciplinary students preferred to build relations with their in-group members (e.g. the same discipline) even when equal opportunity was given to encourage relations with other disciplines. Their findings highlighted the behavioural implications of sameness (in-group) and differences (out-group) in social learning relationships. Ng et al. (2018) used social identity theory to demonstrate how social identity process contributes to the benefits of group membership among international students transitioning to life overseas. Their key finding points out the close connection between social relationships and identity (e.g. "How can you make friends if you don't know who you are?"p.1).

Research Questions

Several empirical studies across the globe have found support that culture is a significant factor in how students develop co-national and cross-cultural relations over time (Curşeu and Pluut 2013, Hendrickson, Rosen, and Aune 2011, Lee 2017, Rienties and Héliot 2018, Rienties, Héliot, and Jindal-Snape 2013, Rienties, Johan, and Jindal-Snape 2015). However, how and why some students primarily focus more on in-group relations, while others focus more on out-

group relations has received limited attention. Therefore, using the lens of social identity theory (Tajfel and Turner 1979) in this rich triangulated mixed method study we aim to explore with whom and perhaps more importantly how and why management students develop learning relations:

- 1) What are the learning relationship patterns of management students in an intercultural and multi-disciplinary environment?
- 2) What factors impact the ways in which management students develop learning relationships with one another in an intercultural and multi-disciplinary environment?

Methodology

Setting and Participants

This study took place in a Master's level module of organisational behaviour at a UK university during students' first semester of study. 113 students in this module came from one of five study programmes. Programme A was designed to permit development as future practitioners in a wide range of organisations for students who are likely to imagine themselves as future consultants. Programme B had a strong emphasis on both stimulating academic study and professional skills development by applying evidence-based analytics and research to real-world HR issues. Programme C aimed at communication and intercultural consultancy in multinational and international business, particularly in the fields of intercultural training, human resource management, and communication. Programme D focused on analysing operation system processes and improving services, in this process, the understanding of how organisations and individual functions are essential. Finally, Programme E helped students to learn how to plan, organise, evaluate, and manage successful hospitality businesses.

The module was designed with the aim that students could learn from peers from the other four programmes. This specific module was a unique opportunity for interdisciplinary learning, as students took other coursework primarily only with those in their own programme. Previous research in this context (Rienties and Héliot 2018, Rienties, Héliot, and Jindal-Snape 2013) has shown that the design of this interdisciplinary module was effective in generating opportunities for cross-cultural and interdisciplinary learning. For a detailed description of the design philosophy of this module, we refer to Rienties and Héliot (2018) published previously in this journal.

Insert Table 1 about here

As highlighted in Table 1, students were from diverse geo-cultural backgrounds, whereby the majority group was from Confucian Asia (68%), primarily from China. In line with Rienties, Héliot, and Jindal-Snape (2013), students' cultural backgrounds were aggregated using the Globe Geo-cultural classification of House et al. (2004) to ensure confidentiality of participants coming from a 'unique' country (e.g., Austria, Singapore, USA).

Procedure

Social network analysis survey

To map the learning relationship patterns of students in this classroom (RQ1), social network analysis (SNA) was used. SNA provides a set of tools to analyse connections between individuals, allowing one to discover and map relationships (Baldwin, Bedell, and Johnson 1997, Curşeu, Janssen, and Raab 2012, Hommes et al. 2012, Wassermann and Faust 1994). As argued by Borgatti and Cross (2003), this network mapping of relationships provides insights into the structures and patterns within communities.

The method used in this research was a ‘closed’ network approach, whereby participants were provided with a list of their peers in the classroom and asked to mark with whom they had developed a learning relationship (Wassermann and Faust 1994). This instrument had previously been tested and validated in the same context during previous implementations of this module (Rienties and Héliot 2018, Rienties, Héliot, and Jindal-Snape 2013). This survey was distributed to all students in this module during their regular lecture after one month in the module and repeated after 12 weeks. All students were given the option of not completing the survey as the voluntary nature of their participation was made clear at the beginning of the survey distributions. This timeline was deliberately chosen to provide time for students to develop learning relationships with peers and begin to adjust to life in the UK (Zhou et al. 2008).

Altogether, surveys were collected from 113 students, which is a response rate of 82%, which is in line with the recommended minimum of 80% for this method (Curşeu, Janssen, and Raab 2012). This data was then visualised graphically using the software Netdraw with ‘nodes’ (depicted as shapes) representing participants and ‘ties’ (depicted as arrows) representing stated learning relationships (i.e., “I learn a lot from ...”), as suggested by Wassermann and Faust (1994). The visualisation of the learning networks over time provided insights into the module’s community structures and patterns of learning relationships (Borgatti and Cross 2003).

Focus groups

RQ2 sought a more in-depth understanding of what factors impacted the learning relationship development experience for students in this interdisciplinary module (i.e., the second measurement of SNA). As such, we used a mixed methods approach by inviting selected participants to in-depth focus groups (Morgan 1998) to illuminate and triangulate the patterns that emerged from the SNA visualisations. What makes the discussion in focus groups more

than the sum of separate individual interviews is the fact that the participants both query each other and explain themselves to each other (Morgan 1998). For this reason, a focus group discussion approach was adopted. Participants were purposefully sampled based on their learning relationship experiences at the end of the module and were recruited by email and lecturer announcements. In total, 30 students were invited to a focus group and 16 participated, which was a response rate of 53%. Participants were divided into four focus groups based on their learning relationship patterns so that students with similar patterns had the opportunity to reflect upon shared experiences.

The focus group procedure was guided by Krueger and Casey (2014). The focus groups took place in a private room on campus and lasted approximately one hour. They were open and semi-structured in nature, allowing participants to direct the flow of conversations as to what was important to their own experiences, and creating opportunities for conversations between participants. At the start of each focus group, participants were asked to reflect upon their opportunities to meet and develop learning relationships with peers. Next, in line with Rienties, Héliot, and Jindal-Snape (2013), all focus group participants were provided with a copy of the anonymised SNA visualisation of Figure 1 (discussed below) and were asked to reflect upon issues that may have impacted patterns of experiences in the classroom, based on their individual and collective journeys.

The focus groups were recorded and transcribed by a member of the research team. These transcriptions were then coded and analysed using thematic analysis by two of the authors, in line with the method suggested by Braun and Clarke (2006). In this way, key themes that were expressed by the focus group participants were triangulated with the SNA visualisation to develop a more in-depth understanding of the classroom network. Ethical approval was provided by the university board for this study.

Results

Social Network Analysis Results

In order to review the overarching trends of learning relationships between students (RQ1), we used the social network analysis survey data to visualise ties between individuals, as demonstrated in the learning network at the end of the module in Figure 1. In this visualisation, each node (i.e. shape) represents one student and each line represents a stated learning relationship between two people. The shape represents the students' programme of study, while the colour provides information about their geo-cultural location of origin. As is visually illustrated in Figure 1, most Confucian Asian students (red) were positioned on the left side of Figure 1, while other, non-Confucian Asian students were mainly positioned on the right of Figure 1. This indicated initially that there was some social segregation between the two groups of students.

Insert Figure 1 about here

Several learning relationship patterns were depicted in this visualisation, which appeared to be influenced by students' geo-cultural region of origin ([House et al. 2004](#)). As indicated before, many students from Confucian Asian countries (e.g. Participants 2, 7, or 12) primarily formed learning relationships with peers from their own cultural backgrounds, which we, therefore, label as *Co-National Learners*. However, there were a small number of Confucian Asian participants (e.g., Participants 14, 15, or 16) who were an exception to this trend, and demonstrated more geo-cultural diversity in their learning relationships. In line with Rienties, Johan, and Jindal-Snape (2015), we refer to these learners as *Bridge-Building Learners*, as these Confucian students appeared to develop bridges between Confucian Asian students and students from other geo-cultural backgrounds. Finally, nearly all students from

non-Confucian Asian backgrounds (e.g., Participants 4, 5, 11) demonstrated diverse learning relationships with peers from different countries, which we refer to as *Cross-National Learners*. As indicated by Table 2, these three ‘learning types’ provided a lens for unpacking students’ experiences through the focus group discussions (described in the next section), and we will refer to students as Co-National Learners, Bridge-Building Learners, and Cross-National Learners throughout the remainder of this paper.

Insert Table 2 about here

In addition to these three learning types, we also noted that some academic programmes represented in Figure 1 had comparatively stronger, cohort-like learning relationships between students. This is perhaps best demonstrated by the 23 members of Programme A (square) on the bottom right of Figure 1, primarily Cross-National Learners. Similarly, at the top right there was a group of 28 students from Programme B (circle) that were primarily connected to each other. Furthermore, there was a smaller group of 10 students in Programme C (up-triangle) that were mostly connected to the bottom middle and left of Figure 1. The largest group of students is shown on the left (circle in the box) from Programme D, which had an especially large cohort of Confucian Asian students (Co-National and Bridge-Building Learners). Finally, the smaller Programme E of 16 students are scattered in a loose cohort on the left of Figure 1 (downward triangle).

In other words, even though there seemed to be relative geo-cultural boundaries between students, as was previously found (Hendrickson, Rosen, and Aune 2011, Rienties, Hélot, and Jindal-Snape 2013), the respective programme that students were enrolled into seemed to also influence with whom students formed social relationships, in line with our previous study (Rienties and Hélot 2018). Therefore, it was also worth considering in our

follow-up qualitative analysis whether there were programme-specific differences that impacted students' ability to develop learning relationships with peers.

Altogether, visualising the social network analysis survey data provided insight into overarching trends of learning relationship building in this course unit. To this, we found that there were different types of in-group experiences (i.e. through both cultural and programme memberships), which brought up questions that we wished to unpack through follow-up focus groups. In particular, we first sought to understand why there were such strong differences in the learning relationship networks of the three learning types outlined in Table 2. Secondly, we wondered whether there were differences between academic programmes that influenced the ways in which students could develop learning relationships and cohort-like mentalities with their peers.

Qualitative Results

Cultural in-groups

As highlighted in Figure 1, cultural in-group membership played an important role in how students developed learning relationships in this classroom. Upon entering the programme, nearly all focus group participants outlined that they originally had intended to develop diverse learning relationship networks with peers from other countries. Yet despite these intentions, many participants across the three student learning types noted initial difficulties or tensions in building intercultural connections.

‘On the one hand, it’s really interesting, because I got to meet a lot of new people. But on the other hand, I didn’t really know how to approach them.’

(Participant 4, female, Germanic Europe, Cross-National Learner)

One notable exception was those who had previous multicultural experiences outside of their cultural in-group, as these participants tended to describe the intercultural environment in this course unit as more natural or inviting. These students were typically Cross-National Learners (i.e. non-Confucian Asian students who demonstrated diverse learning relationships).

‘I don’t have that difficulty because I’ve lived for 16 years of my life abroad in different countries. A lot of time in Southeast Asia. So, it’s easy to start conversations with people just because you don’t know them, for myself anyways. I found that I thrived in that situation.’

(Participant 1, male, South Asia, Cross-National Learner)

‘Especially, I am studying intercultural communications, so we are discussing culture a lot and we are in our class, we come from so many different places, so I think for us it’s easier because we talk about it so much and we kind of now start to figure out how everyone thinks about it, which makes it easier. I think we also, we went into this module having this mindset already, so it made it easier.’

(Participant 5, female, Germanic Europe, Cross-National Learner)

Co-National Learners and Bridge-Building Learners (i.e. those from Confucian Asian countries) more frequently described difficulties developing learning networks with peers from other cultures, even if they had originally intended to do so. One reason for this was the perceived lack of opportunity to connect with others, combined with an ‘ease’ of developing relationships with those from the large cohort of students from their own background. This was perhaps best described by Participant 16, a Bridge-Building Learner, over time, came to rely more on fellow cultural in-group members.

‘Before I came to the UK, I think I would like to spend most of my time with students from other countries because when I decided to go to the UK, I think I need to have some multicultural things...But, well, there are too many Chinese students here [laughs]. It is difficult to communicate with other country students because there are always Chinese students trying to talk with me...That is a problem for me, because I try to know more friends from other countries, but finally I found that, well, there are so many students from my own country.’

(Participant 16, female, Confucian Asia, Bridge-Building Learner)

In this way, Cross-National Learners were frequently ‘forced’ to develop learning relationships with out-group members, as there were often few (if any) in-group members from their own culture present in the classroom. This was starkly different from Co-National and Bridge-Building Learners, as there was an overwhelmingly large cohort of Confucian Asian students.

Co-National and Bridge-Building Learners also often felt that a one-year management programme was not enough time to overcome cultural differences to build sustainable learning connections. There was similarly a perception that such out-group relationships would not likely stand the test of physical distance when they returned to their home countries after the programme. This sentiment was not expressed by any of the Cross-National Learners.

‘I think that it’s, for most of us students, it’s maybe one year here. We only stay here and study for one year. You cannot form, like, a friend for life. It’s not, I don’t think, reliable. It’s not realistic for us. But maybe in the one year, like, friends that we can talk with each other or hang out. But it’s just a one year thing.’

(Participant 13, male, Confucian Asia, Bridge-Building Learner)

Differentiating Co-National and Bridge-Building Learners were their outlooks towards developing learning relationships with out-group members. In this way, Co-National Learners more frequently highlighted lack of access in meeting informally with out-group members, as their social lives and experiences more typically involved those from their own cultural in-group. They also more strongly outlined a perceived inherent awkwardness or discomfort in interacting with out-group members.

‘I think it’s a big challenge for us to speak to people from other countries, because we don’t know how to start or kind of topic. It’s very weird to speak to others, so on the most hand we just talk about to our own country.’

(Participant 12, female, Confucian Asia, Co-National Learner)

Bridge-Building Learners, on the other hand, had more frequent opportunities to meet and build informal connections with out-group members. In part, this was due to increased access to out-group members in their academic programme (discussed in depth below). However, this was also frequently due to situational and social factors outside of the classroom. For instance, Bridge-Building Learners outlined meeting out-group members through shared living arrangements, religious organisations, or through programme-specific induction events.

‘I think I spend most of the time with my Chinese flatmates, but also I have some local friends. I’m a Buddhist and so I joined the group, the Buddhism group, so that’s why I meet some of the local people.’

(Participant 14, female, Confucian Asia, Bridge-Building Learner)

These differences in perspectives and experiences with out-group members may provide clues into the trends outlined in Figure 1 and, in particular, differences between our three student categorisations. A second explaining factor in our analysis was that of experiences with (perceived) discrimination, which is described next.

Discrimination and potential bias

Nearly all Co-National and Bridge-Building Learners shared experiences of perceived discrimination when interacting with out-group members. For some students, this meant encountering what they felt to be insensitive comments about their culture or ethnicity. These experiences were frequently framed as an explanation for why they valued learning relationships with in-group members.

‘In the first class of one of my programmes, it’s like one European student come inside and found that it’s most of the students are from China, so he said, “It’s like Shanghai in here”. Like, actually, it’s true that there’s many Chinese students, but....it’s quite offensive.’

(Participant 13, male, Confucian Asia, Bridge-Building Learner)

‘Sometimes I will feel offended by others. Some words. Like, my Indian friend, one time she said that Tibet is a country or something like this. This problem. Or sometimes she will say, “Chinese look like this” [pulls corners of eyes to make squinted gesture]. It’s not very pleasant to hear these words and maybe sometimes, maybe some words from us will [also] hurt them.’

(Participant 7, female, Confucian Asia, Co-National Learner)

Co-National Learners often talked about bias more abstractly, outlining anxieties related to *potential* discrimination, often in relation to language or communication. For Bridge-Building Learners, experiences of bias were more often actualised; nearly all of these participants outlined critical instances in which they had attempted to build learning relationships with out-group members but found the experience uncomfortable or unfulfilling. These findings may explain why there was only one Confucian Asian student in Figure 1 who primarily had friends with out-group members (as Cross-National Learners did). In this study, nearly all of the Confucian Asian participants maintained numerous ties to their in-group community.

‘I think we are not shy. We want to communicate with them, but every time we show enthusiastic, that characteristic, and if we didn’t get the same response and we feel like we do not, like, use the same methods to communicate with them again. That makes things awkward.’

(Participant 3, female, Confucian Asia, Bridge-Building Learner)

In this way, Co-National Learners outlined that Bridge-Building Learners likely had different life experiences than them, which helped them navigate or overcome bias and cultural differences to ‘fit in’ with out-group members. For example, one Co-National Learner described the kind of traits they thought a Bridge-Building Learner would have, which varied from her own background experiences:

‘I think maybe she is a person who have some Western experience, because I have sawed [sic] a girl in our class in this module and she can speak good English and she

also can speak Chinese, so I think her bachelor degree maybe studied in a Western country.... I don't know, I just thought she usually sit with some foreigner people, but she's Chinese.'

(Participant 7, female, Confucian Asia, Co-National Learner)

Yet, perceptions of bias differed for Cross-National Learners. When discussing issues related to biases from out-group members, these students approached the subject with more optimism. In this way, they more frequently placed the responsibility on the receiving individual to interpret the scenario from a more tolerant perspective than for their classmates to change their perceptions and actions towards out-group members. For example:

'When people see me, they assume I don't speak good English, so they stop speaking or they will make assumptions about the way my family is. And that's...it makes you not want to talk to them. I'd rather distance myself from that person. So I can completely imagine that [other people experience bias], but I think the only way to really overcome that is to have a more optimistic frame of mind and not assume that everyone is out to get you.'

(Participant 1, male, Southern Asia, Cross-National Learner)

In this way, nearly all Cross-National Learners discussed the need for peers to develop comfort and tolerance with out-group members. However, this was often discussed using 'othering' language by describing intercultural competencies as skills that others needed to develop rather than themselves.

‘It’s not the case I’d say because of racism, that’s actually a bit too strong. I think it’s more a dislike...no, I don’t even think it’s a dislike. I think more of it is comfort, comfort in talking to people who use other languages to talk. The reason I say dislike is because it’s maybe a little more difficult with the language barrier and it forces other people to talk in a language they don’t feel comfortable discussing with.’

(Participant 10, male, Anglo, Cross-National Learner)

When asked about divisions between Confucian Asian students and students from other countries in Figure 1, Cross-National Learners described perceived cultural tensions that Co-National and Bridge-Building Learners might feel towards out-group members. However, the language, again, was often ‘othering’ and typically placed the blame on individual perceptions or competencies when interacting with outgroup members. In this way, there was little engagement with or recognition of the instances of bias, discrimination, and discomfort outlined by Co-National and Bridge-Building Learners.

‘I think a lot of the Asian students do find that issue as well, that they want to try and work with that culture but it doesn’t really agree with that, so they also distance themselves. I also think that the British people do try and make an effort to work with the Asian students, but then it doesn’t work as well. It’s really hard to try and make it positive, personally. I don’t mean to be really not optimistic right now, but like, it’s hard to find a common ground between people from very different extremes. For me, I went to an international school so I did grow up with a lot of British people, so I could find a common ground with them, but for people who have never experienced the white culture, it’s really hard to find a common ground.’

(Participant 6, female, South Asia, Cross-National Learner)

Altogether, it was clear that bias and discrimination played a role in participants' learning relationship experiences, in line with recent South African research of Lee (2017). In particular, Co-National and Bridge-Building Learners outlined experiences where they felt discriminated against, leading to perceived barriers towards interacting with out-group members. For Cross-National Learners, these were often framed as a problem of perception and the need for 'other' students to develop stronger intercultural competencies.

Thus, it was evident that there was a wide range of complexities present in this intercultural classroom. Against this background, a second in-group experience explored in our findings was that of academic programme membership, which is outlined next.

Academic programme in-groups

In addition to cultural differences between students, students' academic study programme also influenced their learning relationships in this multi-disciplinary environment (also visible in Figure 1). In this way, many students described a second layer of their in-group identity as belonging to their academic programme, as it was often 'easier' to communicate and learn from peers with the same subject matter perspective. This was highlighted across the three student learning types.

'If it [the assignment] is a case study, I think it is better for us to group up in the same programme. I'm an international hotel management student and we can choose a company, like a hotel company, we are all interested in. But if we have a friend from other programmes, maybe he will have another choice.'

(Participant 7, female, Confucian Asia, Co-National Learner)

Participants reflected upon more opportunities to engage socially with and work with peers from their same academic programme, as they took more classes together and were able

to develop a cohort mentality, as was previously found from our quantitative study (Rienties and Héliot 2018). However, this quantitative study did not establish some of the underlying reasons why some programmes were able to develop strong disciplinary and multi-disciplinary links. Our triangulated data indicated this was particularly the case for those from programmes that had relatively fewer students enrolled, as evidenced in Figure 1 by the close group of squares at the bottom right of the graph. Participant 6 from this programme described her experience as:

‘And with those modules [in my programme] as well, we work pretty close together. We were made to work in different groups, so we did have those kind of seminars and that’s how we got to know each other. So every single week we came back to [course in this study], we were still kind of sitting together, still work together, things like that. I guess that’s how we got so close in the end.’

(Participant 6, female, Southern Asia, Cross-National Learner)

At the same time, it was difficult for some students to bridge the academic programme barriers to form learning relationships with peers from programme out-groups, especially as the curriculum did not ‘force’ students to work interdisciplinary through activities such as group work. In this sense, it was suggested that students needed more incentive or initiative to collaborate with academic programme out-group members.

‘I think you should share your own perspective from your own course as well for the whole piece...kind of come with an answer all together from different perspectives and each of them will learn at the same time. I think that would be interesting at least for the people from Asian background or from a specific course background. They would be willing to share their perspective with people.’

(Participant 10, male, Anglo, Cross-National Learner)

‘When you work in the same class, sometimes you don’t got the knowledge about the other field and then they can bring the other knowledge to you as well. Bu this can cause another problem, which is you don’t have the same standard. You do it in a different way. It may cause a lot of conflicts as well.’

(Participant 2, male, Confucian Asia, Co-National Learner)

This meant that there were pre-existing social divides between students from different programmes when they were placed into an inter-disciplinary environment. This was also evident in Figure 1, whereby we outlined ‘cohorts’ of students who made learning relations more frequently with peers in their same academic programme.

‘I think I actually got to make friendships with people who I have more than one module together. Because then you start talking about it and you know you have something else together and you start maybe meeting up for the other class and also it continues for the next semester. I think there’s more motivation to actually get friends with someone you have something else in common with. Someone from a completely different course and you only have this module, it might be more difficult’.

(Participant 5, female, Germanic Europe, Cross-National Learner)

In this way, academic programme in-groups served as an opportunity to support some students in overcoming barriers to forming learning relationships with cultural out-group members. This is evident in Figure 1, whereby the majority of the Confucian Asian Bridge-Building Learners belonged to academic programmes that were smaller and more diverse. This meant they had more opportunities and access to cultural diversity in their programme in-

group, which in turn influenced the number of cultural out-group learning relationships they developed.

‘I think that our connections are built, like...when we set up the groups or we set up the connections, it’s based on our programme. It’s like a foundation for us to make friends...I don’t know anyone from other programmes.’

(Participant 13, male, Confucian Asia, Bridge-Building Learner)

The opposite was true for Co-National Learners, who more frequently belonged to the larger Programme D, which had a significant cohort of Confucian Asian students that far surpassed numbers in other academic programmes (visible in the top left of Figure 1). This meant that Co-National Learners simultaneously had fewer opportunities to meet cultural out-group members in their programme, combined with the increased ease of developing learning relationships with cultural in-group members in their own programme. In this way, Co-National Learners could more easily develop learning relationships within both of their in-groups (i.e. from both the same culture and academic programme) without ‘needing’ to work with out-group members.

‘I have non-Chinese friends but not much, because in [academic programme] 90% of students come from China.’

(Participant 2, male, Confucian Asia, Co-National Learner)

In this way, participants pointed out that there were multiple, simultaneous ‘in-groups’ present in this intercultural and interdisciplinary environment. As outlined throughout our findings, individual experiences, traits, and contextual factors influenced the spectrum of

students' identities along these two in-group continuums which, in turn, impacted their learning relationship experiences.

‘I think we’re going back to social identity, isn’t it? Where people sort of identify more with someone because of ABCD. And the more you tick the likelihood of you fitting in with someone from a certain social identity group, they tend to be more drawn to them. As much as I think we do, people do try to break out and mix with others, but 9 times out of 10 they go back [P1: laughs]. I think...I don’t know why. It’s so natural, they will go back to those groups.’

(Participant 11, female, Sub-Saharan Africa, Cross-National Learner)

‘I think it will be the strongest with these two [cultural in-group and academic program in-group] combined together, but I think maybe nationality matters more...Because people are comfortable when they speak in their natural language, so that is the point...I think because they share the same or similar cultural backgrounds and they have similar customs and so that makes them...no need to think about the cultural conflicts or sometimes the religious issues.’

(Participant 16, female, Confucian Asia, Bridge-Building Learner)

Altogether, these findings outline the complex ways that social identity theory impacts and influences individual learning experiences in intercultural and multi-disciplinary settings.

Discussion

In this study, we have used a mixed methods approach using social network analysis and qualitative focus groups to understand the complex learning relationship experiences of management students in international and multi-disciplinary environments. Previous literature has outlined that employers often expect graduates to possess the skills required for communication and collaboration with diverse groups of people (Hedayati Mehdiabadi and Li

2016, Mintzberg 2004). However, in line with other studies (Harrison and Peacock 2010, Heffernan et al. 2018, Hendrickson, Rosen, and Aune 2011, Hommes et al. 2012, Rienties, Héliot, and Jindal-Snape 2013), our findings suggest that there are several different learning relationship patterns between students in the same programme (RQ1, see also Table 2). This means that not all students had equal opportunities to practice these expected skills, with Co-National Learners, in particular, in need of additional support and encouragement during interaction with peers from diverse backgrounds. Our focus group data offered the opportunity to distinguish different learning types (Co-National Learners, Bridge-Building Learners, and Cross-National Learners) hence offered insight into the understanding of different learning relationships. Our findings suggest that these learning relationships are contextually specific (e.g. perceived context), situational based (e.g. inside and outside of the programme) and interestingly, identity sensitive (e.g. how the self is positioned within ingroup and outgroup).

Social identity theory (Tajfel and Turner 1979) has offered a useful lens for understanding the complex dynamics underpinning the three learning relationship patterns we identified (RQ2). Our findings are in line with the essence of social identity theory that simply by being part of a group can create discriminatory behaviour (Harrison and Peacock 2010, Lee 2017), no matter whether this was intended to or not. For example, experiences with (perceived) discrimination between ingroup and outgroup indicated that many of the interviewed Confucian Asian participants experienced perceived discrimination from European students. These findings confirm previous qualitative self-reported studies (Harrison and Peacock 2010, Moore and Hampton 2015, Volet and Jones 2012), suggesting that perceived discrimination from peers can impact their level of interest in developing learning relationships outside their own culture group.

At the same time, our innovative mixed method approach highlighted that there was a sense of agency amongst some groups of management students to address some of these

potential biases. The three learning patterns, namely, Co-National Learners, Cross-National Learners and Bridge-Building Learners serve symbolic relations to understand social learning relationships between groups in international and multidisciplinary learning environment. Furthermore, our findings, consistent with a recent study by Ng et al. (2018), suggesting that there is a close connection between social relationships and identity. This highlights that identity has an important function in explaining social relationships. These perceived ingroup and outgroup were expressed as an explanation for why students were willing or reluctant to develop social relationships with their ingroup or outgroup members.

As such, we argue for recognition of the complexity of students' identities and experiences, which includes, but is not limited to, their cultural background. This expands upon prior work in education contexts (Harrison and Peacock 2010, Hendrickson, Rosen, and Aune 2011, Moore and Hampton 2015, Singaram et al. 2011), which have often frequently focused solely on cultural factors, through a more multifaceted understanding of how other in-group memberships simultaneously interact with cultural in-group identities to impact experiences. At the same time, our findings demonstrate how students' preferences across these simultaneous in-groups can be affected by other issues highlighted in the literature, such as experiences of perceived bias (Harrison and Peacock 2010, Moore and Hampton 2015), disciplinary backgrounds (Rienties and Héliot 2018), or opportunities to develop a 'common ground' with out-group peers (Decuyper, Dochy, and Van den Bossche 2010, Van den Bossche et al. 2006).

Implications for Practice

Our findings point to practical implications for the management of learning environment, in particular those who aspire to offer fruitful and meaningful social learning relationships in intercultural and multi-disciplinary environments in order to offer highly skilled graduates. We suggest that a critical and foremost step needs to be given is to the understanding and awareness

of the sensitivity in social learning relationships and its close connection to identity. Carefully considerations are needed at an early stage of designing any graduate programme, and group work and allocation to learning tasks in particular. Failure of these steps can trigger perceived discrimination/bias between groups hence discriminatory behaviour which hinders positive social learning relationships. Programme designers need to develop a holistic, integrated view of their programme, balancing size and scale with sufficient diversity and opportunities to develop cross-cultural and interdisciplinary learning relations.

Limitations and Conclusion

In this study, we have taken a mixed-methods approach using social network analysis questionnaires and focus groups to understanding the learning relationship experiences of management students. In doing so, we recognise several limitations. First, our study has primarily relied upon self-report data and we recognise that the reality of students' experiences or relationships may differ from their stated perceptions. Furthermore, we recognise that there are additional important factors that impact upon social learning spaces within the higher education classrooms, but were not within the space or scope of this study, including class, gender, and ethnicity. The intersectionality of these issues with our focus on cultural background and discipline are useful markers for future research on this topic. Second, our social network analysis data provides only a snapshot in time of students' learning relationships. As learning relationships are dynamic, we recognise that students may grow closer or more distant over time. Thirdly, of course, our context is nested within a UK context within one business school. Finally, we recognise that there were likely questionnaire participants with different or more diverse views who were unable or unwilling to participate in a follow-up focus group. Despite these limitations, our research design has provided an in-depth look at the multifaceted ways in which students experience learning relationships in

intercultural and multi-disciplinary settings, offering a window for institutions or employers into their role in providing support.

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Table 1. Descriptive statistics of cultural backgrounds and labelling in SNA.

Cluster	#students	Countries (samples, and ordered by relevancy)*	Colour in Social Network figures
<i>UK host students</i>	18	UK (17), USA (1)	White
<i>Latin Europe</i>	3	French (1) Italy (2)	Light blue
<i>Nordic Europe</i>	3	Danish (1), Finland (1), Iceland (1)	Yellow
<i>Germanic Europe</i>	2	Austria (1) Germany (1)	Grey
<i>Eastern Europe</i>	14	Bulgaria (1), Cyprus (5), Estonia (1), Azerbaijan (2), Greece (5)	Green
<i>Latin America</i>	1	Country blinded (1)	Orange
<i>Sub-Saharan Africa</i>	1	Country blinded (1)	Dark blue
<i>Middle East</i>	4	Lebanon (1), Turkey (3)	Brown
<i>Southern Asia</i>	9	Indian (5), Malaysia (1), Thailand (3)	Purple
<i>Confucian Asia</i>	77	China (65), China Hong Kong (1), Taiwan (4), Singapore (1), South-Korea (2), Vietnam (3).	Red

Table 2. Learning types of students based on their relationships with peers from different countries.

Learner Type	Definition
Co-National Learners	Students from Confucian Asian countries who primarily had learning relationships with peers from their own geographical region of origin (red, for example participants 7, 8 , 12)
Bridge-Building Learners	Students from Confucian Asian countries who acted as ‘bridge builders’; they had developed learning relationships with both peers within and outside their geographical region of origin (red, for example participant 14, 15, 16)
Cross-National Learners	Students from non-Confucian Asian countries who primarily developed learning relationships with a diverse range of peers from different countries (other colours, for example 1, 5, 6, 10)

Figure 1. Learning network at the end of organisational behaviour course unit.

